OIPE

CRF Errors Corrected by the STIC Systems Branch

Serial Number: QS/09/833 222A

CRF Processing Date: 10/05/01
Edited by: _mw_
Verified by: _____ (ST

☐ Changed a file from non-ASCII to ASCII

☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.

6

☐ Edited a format error in the Current Application Data section, specifically:
_____

ENTERED

☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____.

☐ Added the mandatory heading and subheadings for "Current Application Data".

☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integ

☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically:
_____

☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:
_____

☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:
_____

☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

☐ Inserted colons after headings/subheadings. Headings edited included:
_____

☐ Deleted extra, invalid, headings used by an applicant, specifically:
_____

☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end o
☐ page numbers throughout text; ☐ other invalid text, such as_____

☐ Inserted mandatory headings, specifically: _____

☐ Corrected an obvious error in the response, specifically:
_____

☐ Edited identifiers where upper case is used but lower case is required, or vice versa.

☑ Corrected an error in the Number of Sequences field, specifically:
Field 400 indicated sequence length of "one" — actually,
the sequence length was 14

☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

☐ Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (er due to a PatentIn bug). Sequences corrected: _____

☐ Other:
_____
_____
_____

*Examiner: The above corrections must be communicated to the applicant in the first Offic Action. DO NOT send a copy of this form.

3/1/9

RAW SEQUENCE LISTING   DATE: 10/05/2001
PATENT APPLICATION: US/09/833,222A   TIME: 11:31:05

Input Set : **A:\PTO.MH.txt**
Output Set: **N:\CRF3\10052001\I833222A.raw**

ENTERED

```
    4 <110> APPLICANT: Qin, Ning
    5        Codd, Ellen
    7 <120> TITLE OF INVENTION: cDNA encoding the Calcium Channel Alpha2Delta-4 Subunit
    9 <130> FILE REFERENCE: calcium channel alpha2delta-4 subunit
C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/833,222A
C--> 12 <141> CURRENT FILING DATE: 2001-04-01
   14 <160> NUMBER OF SEQ ID NOS: 14
   16 <170> SOFTWARE: PatentIn Ver. 2.1
   18 <210> SEQ ID NO: 1
   19 <211> LENGTH: 27
   20 <212> TYPE: DNA
   21 <213> ORGANISM: Artificial Sequence
   23 <220> FEATURE:
   24 <223> OTHER INFORMATION: Description of Artificial Sequence:
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   27 <400> SEQUENCE: 1
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   33 <212> TYPE: DNA
   34 <213> ORGANISM: Artificial Sequence
   36 <220> FEATURE:
   37 <223> OTHER INFORMATION: Description of Artificial Sequence:
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   40 <400> SEQUENCE: 2
   41 ctctcgggac ctcttggaga tcagaat                                    27
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   45 <211> LENGTH: 27
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   47 <213> ORGANISM: Artificial Sequence
   49 <220> FEATURE:
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   54 ccatcctaat acgactcact atagggc                                    27
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   58 <211> LENGTH: 23
   59 <212> TYPE: DNA
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   62 <220> FEATURE:
   63 <223> OTHER INFORMATION: Description of Artificial Sequence:
   64        oligonucleotide
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   67 actcactata gggctcgagc ggc                                        23
   70 <210> SEQ ID NO: 5
   71 <211> LENGTH: 24
   72 <212> TYPE: DNA
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RAW SEQUENCE LISTING   DATE: 10/05/2001
PATENT APPLICATION: US/09/833,222A   TIME: 11:31:05

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Output Set: N:\CRF3\10052001\I833222A.raw

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75 <220> FEATURE:
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80 caggctctga gcctgcgagc tgag                                      24
83 <210> SEQ ID NO: 6
84 <211> LENGTH: 26
85 <212> TYPE: DNA
86 <213> ORGANISM: Artificial Sequence
88 <220> FEATURE:
89 <223> OTHER INFORMATION: Description of Artificial Sequence:
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97 <211> LENGTH: 17
98 <212> TYPE: PRT
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101 <220> FEATURE:
102 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
103        peptide
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107   1               5                   10                  15
109 Cys
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119 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
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124   1               5                   10                  15
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132 <212> TYPE: DNA
133 <213> ORGANISM: Homo sapiens
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138 cgaggacatt cagcacacag cagtgcagcc gctgggtcct gagggttctc cgcgtctcct 180
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140 gacaccttcg gcggggacct gtataacact gtgaccaaat actcaggctc tctcttgctg 300
141 cagaagaagt acaaggatgt ggagtccagt ctgaagatcg aggaggtgga tggcttggag 360
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143 cagaatctgg tggaagctgc cgaggaggcc gacctgaacc acgaattcaa tgaatccctg 480
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145 gagctgggcg ccgagttcct cctggagtcc aatgctcact tcagcaacct gccggtgaac 600
146 acctccatca gcagcgtgca gctgcccacc aacgtgtaca acaaagaccc agatattta 660
147 aatggagtct acatgtctga agccttgaat gctgtcttcg tggagaactt ccagagagac 720
148 ccaacgttga cctggcaata ttttggcagt gcaactggat tcttcaggat ctatccaggt 780
149 ataaaatgga cacctgatga gaatggagtc attacttttg actgccgaaa ccgcggctgg 840
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154 gtggaggagt tgatggtcaa aggtgtgggg gtcgtggacc aagccctgag agaagccttc 1140
155 cagatcctga agcagttcca agaggccaag caaggaagcc tctgcaacca ggccatcatg 1200
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158 atgaagtgga ttgcatgcaa caacaaaggc tactacacgc agatctcaac gctggcggac 1380
159 acccaggaga acgtgatgga atacctgcac gtgctcagcc gccccatggt catcaaccac 1440
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164 ggctacatcc tctcccatcc cgacctccgg cccctgtaca gagaggggaa gaaactaaaa 1740
165 cccaaaccta actacaacag tgtggatctc tccgaagtgg agtgggaaga ccaggctgaa 1800
166 tctctgagaa cagccatgat caatagggaa acaggtactc tctcgatgga tgtgaaggtt 1860
167 ccgatggata aagggaagcg agttcttttc ctgaccaatg actacttctt cacggacatc 1920
168 agcgacaccc ctttcagttt gggggcggtg ctgtcccggg gccacggaga atacatcctt 1980
169 ctggggaaca cgtctgtgga agaaggcctg catgacttgc ttcacccaga cctggccctg 2040
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177 ggaccagaaa gtgcgggtga acccatggtg gtgacggcaa gcacagctgt ggcggtgacc 2520
178 gtggacaaga ggacagccat tgctgcagcc gcgggcgtcc aaatgaagct ggaattcctc 2580
179 cagcgcaaat tctgggcggc aacgcggcag tgcagcactg tggatgggcc gtacacacag 2640
180 agctgcgagg acagtgatct ggactgcttc gtcatcgaca caacggtt cattctgatc 2700
181 tccaagaggt cccgagagac gggaagattt ctgggggagg tggatggtgc tgtcctgacc 2760
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186 cacaagaagc aggaccgct gcagccctgc gacacggagt accccgtgtt cgtgtaccag 3060
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188 gtgcagcaga ttcccaacag taacctcctc ctcctggtga cagacaccccac ctgtgactgc 3180
189 agcatcttcc caccagtgct gcaggaggcg acagaagtca aatataatgc ctctgtcaaa 3240
190 tgtgaccgga tgcgctccca gaagctccgc cggcgaccag actcctgcca cgccttccat 3300
191 ccagaggtgc gggttgaggc ggatcgaggg tgggctggat tttcatcccc aaaccctctg 3360
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192 tgcctgggtc tgtgcccctg cagacaggag catatagggga tgccaatgaa cacacctgtg 3420
193 cctgtgcttc tcgggggaaa cattcgcgtt tatgccctgt gacactgtga tataataaga 3480
194 aacaga                                                             3486
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198 <211> LENGTH: 1090
199 <212> TYPE: PRT
200 <213> ORGANISM: Homo sapiens
202 <400> SEQUENCE: 10
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204  1               5                  10                  15
206 Ala Asp Thr Phe Gly Gly Asp Leu Tyr Asn Thr Val Thr Lys Tyr Ser
207             20                  25                  30
209 Gly Ser Leu Leu Leu Gln Lys Lys Tyr Lys Asp Val Glu Ser Ser Leu
210         35                  40                  45
212 Lys Ile Glu Glu Val Asp Gly Leu Glu Leu Val Arg Lys Phe Ser Glu
213     50                  55                  60
215 Asp Met Glu Asn Met Leu Arg Arg Lys Val Glu Ala Val Gln Asn Leu
216  65                  70                  75                  80
218 Val Glu Ala Ala Glu Glu Ala Asp Leu Asn His Glu Phe Asn Glu Ser
219             85                  90                  95
221 Leu Val Phe Asp Tyr Tyr Asn Ser Val Leu Ile Asn Glu Arg Asp Glu
222             100                 105                 110
224 Lys Gly Asn Phe Val Glu Leu Gly Ala Glu Phe Leu Leu Glu Ser Asn
225             115                 120                 125
227 Ala His Phe Ser Asn Leu Pro Val Asn Thr Ser Ile Ser Ser Val Gln
228         130                 135                 140
230 Leu Pro Thr Asn Val Tyr Asn Lys Asp Pro Asp Ile Leu Asn Gly Val
231 145                 150                 155                 160
233 Tyr Met Ser Glu Ala Leu Asn Ala Val Phe Val Glu Asn Phe Gln Arg
234             165                 170                 175
236 Asp Pro Thr Leu Thr Trp Gln Tyr Phe Gly Ser Ala Thr Gly Phe Phe
237             180                 185                 190
239 Arg Ile Tyr Pro Gly Ile Lys Trp Thr Pro Asp Glu Asn Gly Val Ile
240         195                 200                 205
242 Thr Phe Asp Cys Arg Asn Arg Gly Trp Tyr Ile Gln Ala Ala Thr Ser
243     210                 215                 220
245 Pro Lys Asp Ile Val Ile Leu Val Asp Val Ser Gly Ser Met Lys Gly
246 225                 230                 235                 240
248 Leu Arg Met Thr Ile Ala Lys His Thr Ile Thr Thr Ile Leu Asp Thr
249             245                 250                 255
251 Leu Gly Glu Asn Asp Phe Val Asn Ile Ile Ala Tyr Asn Asp Tyr Val
252             260                 265                 270
254 His Tyr Ile Glu Pro Cys Phe Lys Gly Ile Leu Val Gln Ala Asp Arg
255         275                 280                 285
257 Asp Asn Arg Glu His Phe Lys Leu Leu Val Glu Glu Leu Met Val Lys
258     290                 295                 300
260 Gly Val Gly Val Val Asp Gln Ala Leu Arg Glu Ala Phe Gln Ile Leu
261 305                 310                 315                 320
263 Lys Gln Phe Gln Glu Ala Lys Gln Gly Ser Leu Cys Asn Gln Ala Ile
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RAW SEQUENCE LISTING   DATE: 10/05/2001
PATENT APPLICATION: US/09/833,222A   TIME: 11:31:05

Input Set : A:\PTO.MH.txt
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```
264                   325                   330                   335
266 Met Leu Ile Ser Asp Gly Ala Val Glu Asp Tyr Glu Pro Val Phe Glu
267                   340                   345                   350
269 Lys Tyr Asn Trp Pro Asp Cys Lys Val Arg Val Phe Thr Tyr Leu Ile
270                   355                   360                   365
272 Gly Arg Glu Val Ser Phe Ala Asp Arg Met Lys Trp Ile Ala Cys Asn
273       370                   375                   380
275 Asn Lys Gly Tyr Tyr Thr Gln Ile Ser Thr Leu Ala Asp Thr Gln Glu
276 385                   390                   395                   400
278 Asn Val Met Glu Tyr Leu His Val Leu Ser Arg Pro Met Val Ile Asn
279                   405                   410                   415
281 His Asp His Asp Ile Ile Trp Thr Glu Ala Tyr Met Asp Ser Lys Leu
282                   420                   425                   430
284 Leu Ser Ser Gln Ala Gln Ser Leu Thr Leu Leu Thr Thr Val Ala Met
285             435                   440                   445
287 Pro Val Phe Ser Lys Lys Asn Glu Thr Arg Ser His Gly Ile Leu Leu
288       450                   455                   460
290 Gly Val Val Gly Ser Asp Val Ala Leu Arg Glu Leu Met Lys Leu Ala
291 465                   470                   475                   480
293 Pro Arg Tyr Lys Leu Gly Val His Gly Tyr Ala Phe Leu Asn Thr Asn
294                   485                   490                   495
296 Asn Gly Tyr Ile Leu Ser His Pro Asp Leu Arg Pro Leu Tyr Arg Glu
297                   500                   505                   510
299 Gly Lys Lys Leu Lys Pro Lys Pro Asn Tyr Asn Ser Val Asp Leu Ser
300             515                   520                   525
302 Glu Val Glu Trp Glu Asp Gln Ala Glu Ser Leu Arg Thr Ala Met Ile
303       530                   535                   540
305 Asn Arg Glu Thr Gly Thr Leu Ser Met Asp Val Lys Val Pro Met Asp
306 545                   550                   555                   560
308 Lys Gly Lys Arg Val Leu Phe Leu Thr Asn Asp Tyr Phe Phe Thr Asp
309                   565                   570                   575
311 Ile Ser Asp Thr Pro Phe Ser Leu Gly Ala Val Leu Ser Arg Gly His
312             580                   585                   590
314 Gly Glu Tyr Ile Leu Leu Gly Asn Thr Ser Val Glu Glu Gly Leu His
315       595                   600                   605
317 Asp Leu Leu His Pro Asp Leu Ala Leu Ala Gly Asp Trp Ile Tyr Cys
318       610                   615                   620
320 Ile Thr Asp Ile Asp Pro Asp His Arg Lys Leu Ser Gln Leu Glu Ala
321 625                   630                   635                   640
323 Met Ile Arg Phe Leu Thr Arg Lys Asp Pro Asp Leu Glu Cys Asp Glu
324             645                   650                   655
326 Glu Leu Val Arg Glu Val Leu Phe Asp Ala Val Val Thr Ala Pro Met
327             660                   665                   670
329 Glu Ala Tyr Trp Thr Ala Leu Ala Leu Asn Met Ser Glu Glu Ser Glu
330       675                   680                   685
332 His Val Val Asp Met Ala Phe Leu Gly Thr Arg Ala Gly Leu Leu Arg
333       690                   695                   700
335 Ser Ser Leu Phe Val Gly Ser Glu Lys Val Ser Asp Arg Lys Phe Leu
336 705                   710                   715                   720
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VERIFICATION SUMMARY   DATE: 10/05/2001
PATENT APPLICATION: **US/09/833,222A**   TIME: 11:31:06

Input Set : **A:\PTO.MH.txt**
Output Set: **N:\CRF3\10052001\I833222A.raw**

L:11 M:270 C: Current Application Number differs, Replaced Application Number
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date